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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|------------------------------------|---------------------|------------------|
| 09/872,875 | 06/04/2001 | Luis Francisco Vazquez Del Mercado | 1691-8 | 3177 |

7590

11/05/2003

Harrison and Egbert
7th Floor
412 Main Street
Houston, TX 77002

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| EXAMINER |
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WILLS, MONIQUE M

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| ART UNIT | PAPER NUMBER |
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1746

DATE MAILED: 11/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/872,875

Applicant(s)

MERCADO ET AL.

Examiner

Wills M Monique

Art Unit

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4 and 5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

This Office Action is responsive to the Amendment filed August 18, 2003. The rejection of claims 4-5 under 35 U.S.C. 103(a) as being unpatentable over Bertrand WO/009905732, is overcome. The examiner erroneously cited Bertrand et al. WO/009905732 with the publication number WO 97/30183 on the Notice of References Cited form 892. However, the intended reference was Bertrand WO/009905732A1. Further, claims 4-5 are also rejected over Albert WO 97/30183 in view of Prengaman U.S. Pub. 2001/0009743.

Information Disclosure Statement

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Albert WO 97/30183 in view of Prengaman U.S. Pub. 2001/0009743.

Albert teaches an acid lead positive battery grids, comprising the following: a lead alloy containing calcium, at a relative concentration ranging between 0.05 wt.% and 0.12 wt.%, of tin at a relative concentration less than 3 wt.%, aluminum, at a relative concentration ranging between 0.002 wt.% and 0.04 wt.%, and barium, at a relative concentration less than 0.02%. The cell also contains negative grids. See abstract. The lead alloy also contains 0.0005 to 0.005% by weight of silver (pg. 5, lines 30-35).

Albert is silent to a silver content of 0.006 – 0.010%. The reference does not expressly disclose the use of a plurality of positive and negative grids.

Prengaman teaches a lead alloy comprising tin, aluminum, barium, calcium and silver, wherein small amounts of silver are added to the grid to reduce the rate of corrosion but also significantly reduce the rate of penetration of the corrosion process into these grain boundaries (Par. 39). This enables the high tin containing materials to

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resist growth of the battery grid and maintain the integrity of the grid during service. The silver content ranges from 0.010% to 0.020% significantly decrease the rate of grid growth and corrosion during service without making the battery grid too corrosion-resistant for good bonds between the grid and active material during curing.(par. 39). Further, batteries with the silver content can be recycled without the need for expensive refining treatments to remove the silver which h may be required with batteries utilizing higher silver contents. Up to 0.05% of silver may be replaced to enhance initial hardness leaving a *preferred silver content of 0.005% to 0.015% (Par. 53).*

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to increase the silver content of Albert up to 0.010% in order to: reduce the rate of corrosion but also significantly reduce the rate of penetration of the corrosion process into the grain boundaries, significantly decrease the rate of grid growth and corrosion during service without making the battery grid too corrosion-resistant for good bonds between the grid and active material during curing and eliminate need of refining treatments before recycling.

Regarding the employment of a plurality of negative and positive electrodes, It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a plurality of electrode plates , since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. St. Regis Paper Co. v. Bemis Co., 193 USPQ 8.

Response to Arguments

Applicant asserts that Bertrand is patently distinct from the subject invention because it does not teach a silver content within the range of 0.006-0.010. Further, there is nothing in the teachings of the prior art that would suggest, in any way, the instant percentage as utilized within the alloy. These assertions are correct and the rejection is overcome.

Conclusions

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Monique Wills whose telephone number is (703) 305-0073. The Examiner can normally be reached on Monday-Friday from 8:30am to 5:00 pm.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.

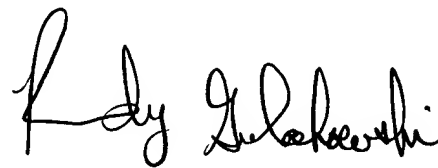
If attempts to reach Examiner by telephone are unsuccessful, the Examiner's supervisor, Randy Gulakowski, may be reached at 703-308-4333.

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The unofficial fax number is (703) 305-3599. The Official fax number for non-final amendments is 703-872-9310. The Official fax number for after final amendments is 703-872-9311.

Mw

09/22/03

A handwritten signature in black ink, appearing to read "Randy Gulakowski". The signature is fluid and cursive, with the first name "Randy" and last name "Gulakowski" clearly distinguishable.

RANDY GULAKOWSKI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700